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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/508,378	06/02/2000	JEAN-YVES SANCHEZ	032013-024	7406

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EXAMINER

ZALUKAEVA, TATYANA

ART UNIT	PAPER NUMBER
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1713

DATE MAILED: 02/26/2003

12

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/508,378

Applicant(s)

SANCHEZ ET AL.

Examiner

Tatyana Zalukaeva, PhD

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 19 November 2002.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,2,4,5,14,16,29,34 and 37-39 is/are pending in the application.
- 4a) Of the above claim(s) 14 and 37-39 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,2,4,5,16,29 and 34 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☒ Claim(s) 1,2,4,5,14,16,29,34 and 37-39 are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ 6) ☐ Other: _____

DETAILED ACTION

1. Claims 3, 6-13, 15, 17-28, 30-33, 35 and 36 have been cancelled by Applicants' amendment, Paper No. 11.

2. Claims 1,2, 4, 5, 14, 16, 19 and 34 are amended to overcome rejections under 35 USC 112, second paragraph, and these rejections are, therefore, withdrawn.

3. Claims 37-39 are added.

4. Applicants elected the specific copolymer, exemplified in Example 4, which is stated in Paper No.8, page 2. Example 4 of the instant Specification is a **methacrylonitrile (MAN)/ glycidyl Methacrylate copolymer.**

Therefore, claim 14 is not readable on the elected species, and is withdrawn from consideration.

5. Newly submitted claims 37-39 are directed to the species of polymer that is independent or distinct from the invention originally claimed for the following reasons: the copolymer elected by applicants is a MAN/glycidyl Methacrylate polymer, wherein in claims 37-39 the second comonomer other than methacrylonitrile is inherently different than glycidyl Methacrylate, which is seen from the recitation of its impact into the characteristics of resulting polymer.

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Since applicant has received an action on the merits for the originally presented invention, this invention has been constructively elected by original presentation for prosecution on the merits. Accordingly, claims 37-39 are withdrawn from consideration as being directed to a non-elected invention. See 37 CFR 1.142(b) and MPEP § 821.03.

6. Claims 1, 2, 4, 5, 16, 29 and 34 are examined on the merits.
7. Applicant's arguments with respect to claims 1,2,4,5, 16, 29 and 34 have been considered but are moot in view of the new ground(s) of rejection.
8. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.
9. Claims 1, 2, 4, 5, 16, and 34 are rejected under 35 U.S.C. 102(e) as being anticipated by Shiokawa et al (U.S. 5,800,914).

Shiokawa discloses a thermoplastic resin , which are methacrylonitrile copolymers, specifically methacrylonitrile-glycidyl (meth)acrylate copolymers are named in col. 5, lines 49, 50. Shiokawa further teaches that glycidyl (meth)acrylate imparts adhesiveness, **crosslinking properties** and heat resistance to polymers (col. 6, lines 28-30), thus inherently providing for three-dimensional polymers.

10. Claims 1, 2, 4, 5, 16, and 34 are rejected under 35 U.S.C. 102(b) as being anticipated by Ide et al (U.S. 5,258,234).

Ide discloses a thermal image transfer recording medium (abstract) comprising a copolymer methacrylonitrile (abstract) and a monomer (B) presented by formula (I) in the abstract wherein R2 represents a glycidyl group.

Examples of thus formed copolymers are presented in col.3, lines 31-54, wherein the copolymer of **methacrylonitrile and glycidyl (meth)acrylate** is expressly named in lines 43, 44, claim 10. The comonomers, such as glycidyl (meth) acrylate, according to Ide, promote crosslinking performance (col. 4, lines 13-16, 61-63), thus inherently providing three-dimensional characteristics to the resulting polymer.

11. Claims 1, 2, 4, 5, 16, and 34 rejected under 35 U.S.C. 102(b) as being anticipated by Labana et al (U.S. 3,873,493).

Labana discloses epoxyfunctional copolymers of acrylic monomers with glycidyl Methacrylate (abstract). Thus the copolymer disclosed in col. 1, lines 50-55 comprising methacrylonitrile, glycidyl Methacrylate and balance of methyl Methacrylate.

12. Claim 29 is rejected under 35 U.S.C. 103(a) as being unpatentable over any one of the following: Shiokawa, Ide each one individually.

Shiokawa and Ide do not disclose the specificities of making the copolymer of the instant claim 29. However, both Shiokawa and Ide suggest that the polymerization can

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be performed by conventional methods with the use of free radical initiator (Shiokawa, col. 6, lines 50-55) and Ide (col. 4, lines 53-60). Therefore, a person skilled in the art would have found it obvious via routine optimization of polymerization conditions, such as time and temperature to employ conventional bulk polymerization procedure in order to obtain polymers with desirable conversion and molecular weights and polydispersities. Differences in concentration, or temperature will not support the patentability of a subject matter encompassed by the prior art unless there is an evidence indicating such concentration or temperature is critical.

Furthermore, wherein the general conditions of a claim are disclosed in the prior art, it is not inventive to discover the optimum or workable ranges of time, temperature, concentration, etc., by routine optimization, *In re Aller*, 220 F.2d 454,456, 105 USPQ 233, 235 (CCPA 1955), see also *In re Hoeschele* 406 F.2d 1403, 160 USPQ 809 (CCPA 1969). In other words if there is no links between the optimization and a parameter the optimization is obvious.

13. Claim 29 is rejected under 35 U.S.C. 103(a) as being unpatentable over Schroeder (U.S. 4,187,3535) or Vacik et al (U.S. 3,931,123

Schroeder discloses copolymerization of methacrylonitrile without a solvent for 24 hours at approximately 50°C in the presence of free radical initiator (col. 5, lines 35-47, col. 7, example 36, col. 8, example 39)

Vacik discloses copolymerization of methacrylonitrile with glycol monoesters of acrylic acids (abstract), the polymerization is carried out in bulk at 40°C in the presence

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of free radical initiator (col. 4, example 4) or at 60°C in bulk in the presence of free radical initiator (example 8, col. 5), example 12, col. 5.

With regard to the differences in parameters of polymerization as per Schroeder and Vacik compare to the instant claims the same rationale, as applied above in the rejection of claim 29 over Shiokawa or Ide, is incorporated herein in its entirety.

14. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tatyana Zalukaeva, PhD whose telephone number is (703)30-8819. The examiner can normally be reached on 9:00 - 5:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Wu can be reached on (703)308-2450. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 872-9310 for regular communications and (703) 872-9311 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0651.



Tatyana Zalukaeva, PhD
Primary Examiner
Art Unit 1713

February 20, 2003